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THE NORTHERN STEAMSHIP COMPANY: THE DEPRECIATION PROBLEM IN THE NINETEENTH CENTURY

Abstract: In 1889 a New Zealand company had to write down its paid-up capital by 27 percent, because, the Chairman stated, previous management had failed to allow for depreciation as an expense. An investigation was conducted to see if this capital reduction could have been avoided had the company followed modern depreciation policy. This revealed that the failure to depreciate adequately was not the main cause of the capital reduction, other firms followed the same practice and contemporary English legislation did not permit depreciation as a tax deductible item, while United States courts were rejecting depreciation as a valid expense.

One of the oldest firms in New Zealand is the Northern Steamship Company Ltd., (Northern) formed in 1881. The company, which is still operating, reported net profits for seven of its first eight years. Then, in 1889, to the shock of its shareholders, the chairman announced the retiring managing director had failed to adequately depreciate the company's ships so that they now appeared in the books at an unrealistically high figure, causing a misleading valuation of the assets. Consequently, it would be necessary to write down the company's nominal capital by 27 per cent.

We became interested in seeing whether this unexpected need to reduce the capital by such a large amount could have been avoided had the company depreciated its ships in, what is today, the conventional manner. An investigation of the company's accounts from 1881 to 1889 reveals that depreciation had not even been reported as an expense. The directors, in the first eight years, did not deduct any depreciation from net profits, but instead small amounts were debited to retained earnings and credited to depreciation reserve, which was treated as part of shareholders' funds. The

allocation for depreciation in most years was £1,000, on a fleet of ships costing, on average, £90,000 each, in one year this was increased to £3,000. The Northern directors' concept of depreciation appears to have been as a reserve to which they allocated what the net profit of the year would bear; the amount certainly bore no relationship to the expected lives of the ships or their replacement costs. At the Annual Meeting in 1882 [*New Zealand Herald*, 1882, p. 6] the Chairman asked the shareholders to approve the allocation of £1,000, just over 2 per cent of the value of the fixed assets, towards depreciation, making it quite clear that the directors did not regard depreciation as a cost, but a discretionary allocation of distributable profits, needing the sanction of the shareholders. At the 1888 Annual Meeting Northern was still following this policy, the Chairman saying "In the matter of depreciation your directors would like to have been able to write off a larger amount [than £1,000] but as the fleet has been maintained in good working order and condition this is a matter that must stand over until the return of better times." [*New Zealand Herald*, 1888, p. 3] In his 1889 address, he referred to the necessity of writing down the value of the ships to current value, indicating his belief that the balance sheet should approximate net worth. It was logical, therefore, if the ships were not declining in value that there was no need to depreciate them.

The Northern accounts not only failed to include depreciation as an expense, but they also omitted bad debts and insurance. All three items were debited to retained earnings, with corresponding credits to reserves, which were incorporated in shareholders' funds. The company used self-insurance, but the amounts allocated were quite inadequate; even worse, some repairs were debited to the insurance reserve, another instance of management allocating what the year's profit could "afford." Dividends were paid on the Northern shares during the first three years of its life; as the capital had to be written down a few years later there is the possibility some of these dividends were distributed from capital.

Had the Northern accounts been prepared in accordance with modern conventions, with depreciation expense calculated at 7 per cent of cost price (as recommended by some nineteenth century experts) would the amended results have disclosed the imprudence of distributing dividends during the first three years? How could company executives, as late as 1881, have been so unaware of the necessity to charge depreciation to operating income for the decline in value of the company's fixed assets?

Northern's Accounts

For the first five years, the company's auditor was an accountant, described by the Chairman as having been a member of the Edinburgh Stock Exchange for a considerable period.

When the profit and loss accounts are redrafted in a modern format the differences revealed are (See Appendix I for details):

	Net Profit Reported in Northern Accounts	Restated Net Profit
1882	8550	3000
1883	11063	3296
1884	6748	42
1885	905 (loss)	11032 (loss)
1886	2755	5624 (loss)
1887	4522	7357 (loss)
1888	1490	7357 (loss)
1889	5417	3430 (loss)

The first three years' cumulative amended profits were £6,338 whereas the dividends paid during that time totaled £13,143 which means that half the dividends were distributed from capital. The restated accounts would have served as a warning that net profit did not justify ten per cent dividends, but there was no legal requirement in 1882 to provide for depreciation, let alone an adequate amount, before paying a dividend.

Had the accounts included all expenses they would have clearly disclosed that the company had been operating at a loss for five of the eight years. The writing down of the nominal capital by 27 per cent is another question. Between 1882 and 1889 the Northern directors provided £12,000 for depreciation, whereas a calculation at the apparently then conventional rate of 7 per cent on cost totals £36,391, a difference of £24,391 (Appendix 2). But capital was reduced in 1889 by £30,000, so that inadequate depreciation is not the only explanation. Faulty depreciation policy was not the sole reason for the balance sheet value of the assets being unduly high. There were additional factors, such as the depression in the shipping industry, with the consequent surplus of idle ships. New competitors on Northern routes meant the older ships were taken out of service but could not be sold, and the advent of steel ships dramatically reduced the worth of Northern's wooden vessels, The Northern directors' failure to envisage the matching concept was,

therefore, not the full reason for the required capital write down in 1889.

The second question is much more difficult to answer. It may be asked why a company formed as late as 1881 did not provide for depreciation as an expense. Surely it was by then recognized that no profit could be reported before the decline in value of the fixed assets had been allowed for; was it not regarded then as imprudent to distribute a dividend without first making provision for depreciation be included as an expense? Audit text books certainly taught auditors to ensure that a proper amount was written off for depreciation, and it would appear the Northern Steam directors were negligent in their stewardship. However, there were many companies which did not provide for depreciation at that time, and if the Northern Steamship directors had sought guidance from legal decisions they would not have obtained clear directions, because the English Courts did not establish well defined principles for the treatment of depreciation until after the Northern reconstruction. It was during the ten years between the founding of Northern in 1881 and its reconstruction in 1890 that the English Courts changed their definition of capital from a legal to an economic concept, and even amongst those advocating the desirability of providing for depreciation there was no general agreement as to what purpose it served.

There is no doubt that by 1881 many firms, including shipping companies, provided for depreciation of their assets. An English case, Davison v. Gillies, [1879] clearly expressed the Court's opinion that provision for depreciation was desirable, particularly mentioning the case of ships. Jessel, M.R. stated:

> Supposing a warehouse-keeper, having a new warehouse, should find at the end of the year that he had no occasion to expend money in repairs, but thought that, by reason of the usual wear and tear of the warehouse, it was a thousand pounds worse than it was at the beginning of the year, he would set aside £1,000 for a repair or renewal or depreciation fund before he estimated any profits; because, although that sum is not required to be paid in that year, still it is the sum of money which is lost, so to say, out of capital, and which must be replaced. . . . Shipowners, I believe, generally reckon so much a year for depreciation of a ship as it gets older. Experience tells them how much they ought to set aside; and whether the ship is repaired in one year or another makes no difference in

> estimating the profits, because they know a certain sum must be set aside each year to meet the extra repairs of the ship as it becomes older. . . . That being so, it appears to me that you can have no net profits unless this sum has been set aside.

Accounting and Auditing Views

One accountant, J.D.S. Bogle [1889, p. 693], in a prize winning essay on depreciation, also used shipowners' practice to illustrate the way in which depreciation should be calculated, stating, "As a rule it may be taken that the life of a steamer averages about 20 years, and frequently the rate of depreciation is fixed by the articles of association, or in general meeting. Sometimes 6 and 7 per cent is allowed for, which in most cases may be considered a fair rate." It appears that by 1880 the practice of depreciating ships was also well established in Australia and a recent survey of nineteenth century Australian companies by R.D. Morris [1984, p. 74] found that "All shipping companies sampled [four in 1880] charged depreciation on their ships either as an expense or as a profit appropriation."

New Zealand companies in the nineteenth century presented accounts in accordance with their articles of association, but after 1860 those companies without articles were required to comply with Table B of The New Zealand Joint Stock Companies Act [1860], copied from the English 1856 Act. This included a set of model articles incorporating a model Balance Sheet that set out the assets as follows:

> Immovable Property, distinguishing
> (a) Freehold Land
> (b) Ditto Buildings
> (c) Leasehold ditto
>
> Movable Property, distinguishing
> (d) Stock-in-Trade
> (e) Plant
>
> The cost to be stated with deductions for deterioration in value as charged to the Reserve Fund or Profit and Loss.

It is quite clear that the legal draftsman envisaged depreciation would be provided in the normal course of events, and what is more that the amount designated as depreciation was also to be deducted from the cost of the fixed assets in the balance sheet.

This the Northern board failed to do, crediting instead the small depreciation amount to shareholders' funds. What is of interest is, that in both the English and the New Zealand Acts, the company chosen as an illustration for the model memorandum of association was a shipping company. Table A of The New Zealand Companies Act [1882] included the same model balance sheet, and the illustrative company was again the "Wellington Steam Navigation Company Limited." The Directors should have been familiar with the Companies Act, and the use of a shipping company should have influenced the Northern board to deduct depreciation from assets in their financial statements.

As regards the auditing texts, Pixley [1881, p. 118] a leading authority at the time of the formation of Northern, expressly stated:

> The Auditor should also require a proper amount written off for depreciation of plant, machinery,&c. This is usually a percentage on the cost, and small or large according as it has to be seldom or frequently replaced, the object being to charge the Revenue Account of the period with a proper sum for the usage of the plant, and for the balance to represent its present value.

Another English accountant, J.W. Best [1885, p. 8] had no doubt that depreciation on ships was a necessary expense before profit could be calculated, certainly not a token allocation from retained earnings:

> [If a shipowning company] begins the year with ten ships, value say £100,000, and ends the year with the same ten ships, and the result of the trading, after allowing for depreciation of the ships, is a loss of £100 [this] would be what is here called a loss on revenue account.

Nevertheless, there was, in 1881, no unanimity as to the desirability of providing for depreciation, and less agreement as to its treatment in financial statements, nor even amongst advocates of depreciation was there any general agreement as to what was to be achieved thereby. H. Pollins [1956, p. 343] wrote that railway companies' experience was that some saw depreciation as representing a fall in value (which meant depreciation was not required if the asset had increased in value); some perceived it as an allowance for replacement; while others meant no more than current repairs and maintenance. R.P. Brief [1976, p. 66] mentions that others reasoned depreciation did not involve a cash outlay and was

therefore avoidable in periods of low profits or at the discretion of the manager. The Northern directors from 1881 to 1889 were thus not unique. Brief also provides an example of an English shipping company, operating at the same time as the Northern, which provided for depreciation at irregular intervals. The National Steamship Company of Liverpool in 1886 belatedly allocated £650,000 for past depreciation.

Ewing Matheson, [1893, p. 44], a nineteenth century authority on depreciation, agreed that in certain circumstances depreciation could be a discretionary allocation of profits rather than a necessary annual expense, saying:

> There are cases where it is very difficult to apply exact rates of depreciation, and yet where the uncertainty which causes the difficulty increases the need for writing off. . . . Therefore while in average or normal years of working a moderate rate of depreciation may suffice for mere physical deterioration, advantage should be taken of prosperous years to write down liberally the book value of the plant.

Matheson was referring specifically to iron, steel and chemical works.

Another confusion remarked by E.H. Turner [1894, p. 549], much later than the formation of Northern, was in the calculation of the actual amount to be provided as depreciation.

> A manufacturer in the good old days . . . . looked upon bookkeeping, in anything approaching a scientific manner, as a waste of time. . . . Consequently, in providing for depreciation, the course of reasoning would be something like this: "This machine will last for 20 years if it is well looked after, therefore I must depreciate at 5 per cent." He did so at the end of the first year, and correctly so, but at the end of the second year he overlooked the fact that the depreciation should have been not only at the *same rate* but also should have been the *same in amount,* and took it on the *reduced* capital value. . . . And so the error was perpetuated, and is still being perpetuated to-day in the majority of cases.

Evaluation of Northern's Accounting

Inadequate depreciation by the Northern board therefore seems to have been the result of a general lack of understanding of what

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we would call the matching concept and not a particular management's incompetence. The Northern directors could, with hindsight, be blamed for naivety in failing to depreciate their ships adequately, but some shipowners made no allowance for depreciation at all, as illustrated by another English accountant, J.M. Wade [1866, p. 693]. He pointed out that shipowners were an exceptional case.

> There is another class of investments, which consist of shares in Limited Companies, formed for the purpose of owning ships or mines, . . . Some of these companies make due provision for depreciation themselves, and the dividends they declare may be treated as Income. Others make no such provision. This is especially the case in single ship companies, whose capital consists of the ship solely, and all the earnings are divided. Here the recipient of the dividend has got to make his own provision for depreciation out of the dividend he receives, and this should receive his full consideration.

Wade drew attention to the difficulty of a trustee in making his own provision for depreciation where he had to apportion the dividend between tenants and remaindermen. His solution was, [Wade, 1886, p. 694] "I don't know that any rules have yet been laid down as to dealing with ship's dividends, and I can only say that trustees should be very shy of holding such investments, and be carefully advised as to what portions of the dividends they treat as Income." Northern was formed when a syndicate which had been operating as nine single ship companies merged. Even after the founding of Northern, a separate ledger was kept for each ship, so the convention that shareholders, on receipt of a dividend, made their own allowance for depreciation was probably still a factor in the Northern directors' thinking during the company's earlier years.

A further circumstance which would have confused the issue was that at the time of Northern's formation the English Courts had not yet clearly formulated their policy regarding depreciation. In an 1879 case, Davison v. Gillies [1879], the Master of the Rolls granted an injunction preventing London Tramway Company directors from paying an ordinary dividend without first restoring the tramway to an efficient condition. One year later, the same judge ruled in Dent v. London Tramway Company [1880] that the identical company did not have to make good the failure to provide for depreciation in previous years before paying a preference dividend. These ap-

parently contradictory decisions were later described by Cotton, L.J. in Lee v. Neuchatel Asphalte Company, [1889] as "entirely consistent with one another, and entirely depend on the directions contained in the articles of association, not on the general law." However, another judge in the same case was of the contrary opinion saying, "I feel there is a little difficulty in reconciling the two." If the legal attitude was uncertain it is not to be wondered that in the early 1880s Northern's management did not perceive a clear need to provide for depreciation as an expense. The London Tramway Company's Article 107 did require that "No dividend shall be declared except out of the profits of the company" [Davison v. Gillies] and the 104th Article stated "The directors shall, before recommending any dividend, set aside out of the profits of the company, but subject to the sanction of the company in general meeting, such sum as they think proper as a reserve fund for maintenance, repairs, depreciation and renewals." One judge in the Lee v. Neuchatel [1889] case, stated "There is nothing at all in the Acts about how dividends are to be paid, nor how profits are to be reckoned; all that is left, and very judiciously and properly left, to the commercial world. It is not a subject for an Act of Parliament to say how accounts are to be kept; what is to be put into a capital account, what into an income account, is left to men of business." Northern did have its own articles, so that it was not bound by the requirements of Table B of The Companies Act, and the Northern articles made no mention of depreciation. It would appear, therefore, that Northern's directors were, as the English Courts at the time saw it, lawfully exercising their discretion to determine annual profits.

The Tax Aspects

The nineteenth century English treatment of depreciation for tax purposes would not have persuaded the Northern board to regard depreciation as an expense. The English Income Tax Act [1842] imposed income tax upon the annual profits or gains arising from any trade, employment or vocation, providing in section 100 that:

> In estimating the balance of profits and gains . . . no sum shall be set against or deducted from . . . such profits or gains, on account of any sum expended for repairs of premises occupied for the purpose of such trade, manufacture, adventure, or concern, nor for any sum expended

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> for the supply or repairs or alterations of any implements, utensils, or articles employed . . . beyond the sum usually expended for such purposes according to an average of three years preceding the year in which such assessment shall be made.

Following this clause the Court, in Forder v. Andrew Handyside and Company [1876], disallowed an appeal that depreciation be accepted as a tax deductible expense, even though the company's articles empowered the directors "from time to time, before recommending any dividend, to set aside out of the net profits of the Company such sum as they think proper . . . for the purpose . . . of restoring, reinstating or maintaining the works, plant and other premises or property of the company. . ." The majority of the local tax commissioners were of the opinion that persons in trade were equitably entitled to write off from their profits a sum for depreciation and that the amount claimed was fair and reasonable, and so decided in favour of the company. However, the Surveyor of Taxes appealed this decision and the Court, while agreeing "the sum of £1,509 is a sum which a prudent man would put by for the purpose of meeting what may be called the expenses of renewal" nevertheless decided "the net profits are not really less by reason of this deduction. The deduction is made 'for the purpose of meeting contingencies, or of purchasing, improving, enlarging, rebuilding, restoring, reinstating or maintaining the . . . property of the company'." In New Zealand there was no income tax until the Land and Income Assessment Act [1891] but the English 1842 Act plus the 1876 interpretation of that would not have influenced the Northern directors to alter their depreciation policy.

U. S. Precedents

United States Court decisions of the time supported the Northern directors' attitude. Whereas the English Courts regarded depreciation as an optional expense, the amount and indeed its incidence depending on the individual company's articles and the discretion of the directors, the American Courts until 1893 seem to have positively rejected depreciation as a valid reduction of net income because it did not involve the expenditure of cash. The Supreme Court case Eyster v. Centennial Board of Finance [1877] spelt this out. "Popularly speaking, the net receipts of a business are its profits," when disallowing a claim for depreciation as an expense because "The public, when referring to the profits of the business of a merchant, rarely ever takes into account the depreciation of

the buildings in which the business is carried on, nothwithstanding they may have been erected out of the capital invested." H. R. Hatfield [1909, p. 125] in his *Modern Accounting,* disapprovingly mentioned six other American cases where the Courts refused to recognize depreciation as an acceptable deduction from net income, labelling it "not a proper charge" which "cannot be tolerated for a moment". These decisions can be explained to some extent by the American Courts' belief that depreciation was an allocation of distributable profit and not an operating cost, and also by the special circumstances of some cases, where the inclusion of depreciation as an expense appeared to be an attempt to improperly depress reported net profits to the detriment of another party. One of the "less satisfactory" cases listed by Hatfield, that of Tutt v. Land [1873] illustrates this "depreciation is an allocation" theory. Here, one partner provided the capital and the other "time, labor and skill". The articles of copartnership included the requirement that "Profits shall only be reckoned after deducting all *expenses of the business* . . . ." The partner supplying capital charged depreciation on store fixtures and stock as expenses when calculating profits, but a Court-appointed auditor disallowed the depreciation, a decision supported by a jury and later upheld by the Supreme Court of Georgia. The Court held that depreciation was something for which the owner should have provided from his share of the profits, not deducted as an expense of the business, expressing the view that an allowance for depreciation would be a factor in the owner's share of the profits being 75 per cent, saying:

> We do not think that under this contract the partner who furnishes the stock, can, at the dissolution, claim for the ordinary, natural decrease in the value of the goods. That is a risk or incident which attaches to his property, and is [doubtless] an item considered and passed upon by the party who invests his capital in that form, when he enters into such a contract.

Another U.S. Supreme Court case exemplifying the allocation theory was United States v. Kansas Pacific Railway Company [1878]. The Kansas railway had received a Federal Government subsidy of $16,000 per mile for construction of a line from the mouth of the Kansas River to connect with the Union Pacific. In exchange the company agreed to pay the Government five per cent of the net earnings from the line. The Government disputed the company's deduction of depreciation in the calculation of net earnings. The

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Government's claim was upheld by the Court, which stated "Depreciation . . . is explained to be the amount necessary to put the road in proper repair, but which was not actually expended for that purpose. We are clearly of the opinion that it is not a proper charge. Only such expenditures as are actually made can with any propriety be claimed as a deduction from earnings." Ten years later a Michigan Court also rejected depreciation as "not proper" in Macintosh v. Flint & Pere Marquette Railroad Company [1888] and not surprisingly, because the company's use of depreciation could be regarded as part of a scheme for the controlling group to unlawfully maintain their dominance. This company had been reorganized with two classes of stockholders, preferred seven per cent stock, with one vote per share, and common stock, not entitled to vote nor to a voice in the management until the new company had earned and paid, for five successive years, seven per cent annual dividends on the preferred stock. The company paid seven per cent to the preferred stockholders in some years, but not for five consecutive years, claiming that although there was sufficient cash to pay the full seven per cent dividend, it had not been "earned" every year. The plaintiffs contended that the accounts had been kept wholly in the interests of the preferred stockholders, expensing items which should have been capitalized so as to deprive the common stockholders of their voting rights. An example of this was the replacement of iron rails with steel rails, charging the difference between the cost of the new rails and the value of the old to operating expenses under "track repairs." Again, two steamers owned by the company were enlarged and made more efficient, the cost being charged to earnings, while the purchase of eight new freight engines and 200 coal cars was charged to operating expenses. The court regarded this bookkeeping as an unwarranted attempt by the preference class to maintain their control, and rejected the company's allowance for depreciation as part of the same unacceptable scheme, stating:

> These [Depreciation] charges were not actually expended out of earnings, but were estimated and charged against operating expenses. This was not proper. No depreciation account was either kept or warranted by the charter as between the two classes of stockholders, and no expenditure having actually been made to meet such depreciation, the estimated amount thereof could not properly be deducted from earnings or net income.

Another decision Hatfield regarded as unsatisfactory was that of

San Diego Water Co. v. San Diego [1897], but the details of the case indicate that this decision seems to have been based on specific facts rather than a conscious policy to reject depreciation as a valid expense. Here, the water company appealed against the water rates imposed by the City of San Diego which were, it was claimed, insufficient to meet the water company's operating expenses. Included amongst these operating expenses was annual depreciation of the plant on account of natural decay and use amounting to three and one third per cent of its value. The Court dismissed the appeal, saying it "cannot be tolerated for a moment." But this is certainly understandable in the circumstances as a large proportion of the depreciated plant took the form of wells and land. As the Court validly pointed out, "there is no depreciation of these things; there is no wear and tear, no permanent and gradual destruction by use and age." However, the following year this decision was quoted as a precedent to determine that ". . . the water company is not entitled to be reimbursed from the income derived from rates for interest upon its indebtedness nor for depreciation of its plant, aside from the amount requisite for its maintenance and repairs during the year." [Redlands Water Co. v. Redlands (1898)].

Redefining Capital

A factor which may have confused the issue was one to which E. A. French [1977, pp. 306-331] has drawn attention; it was during the 1880s that the concept of capital was being reconsidered, particularly by the English Courts. The Companies Act [1862] did not specify the manner in which profits were to be calculated nor the requirements for payment of dividends, though article 73 of Table A stated "No Dividend shall be payable except out of the Profits arising from the Business of the Company." Therefore, in the absence of definite instructions in the legislation, the English Courts formulated their own standard to protect both creditors and shareholders, the concept of "capital maintenance." At the time Northern was formed these Court decisions were in the process of evolving the concept, hence the apparently contradictory decisions of Dent v. London Tramways and Davison v. Gillies, mentioned above. Originally, the notion of capital to be maintained was a legal one, that is the paid-up capital on the liabilities side of the balance sheet, but during the 1880s some of the Court of Appeal judges became concerned about possible undesirable effects of their capital maintenance doctrine. It seemed to them that a rigid interpretation could immobilize company resources and restrict management's ability

to reallocate them, with as one judge said in Lee v. Neuchatel Asphalte [1889] the potential to "paralyze the trade of the country." The English Court of Appeal found a solution in accepting submissions that an economic definition of capital should be used, consequently capital became the "aggregate of the assets" on the other side of the balance sheet. This change had the advantage of enabling a particular economic definition to be chosen, that which divided assets into fixed and circulating, a dichotomy introduced by Adam Smith [1776]. This dichotomy permitted the Courts, as in Verner v. General Commercial Trust [1894], to redefine their notion of capital maintenance, replacing the view that nominal capital had to be maintained before a dividend could be declared with the rule that no dividend could be distributed until the company had made good any loss in circulating capital. A logical consequence of the removal of fixed assets from the capital to be maintained was to clearly establish the rule that it was not necessary to provide for depreciation on fixed assets before distributing a dividend. In the case Re Kingston Cotton Mill (No. 2) [1896] it was held that a company could lawfully pay a dividend out of current profits without setting aside a sum sufficient to cover depreciation in the value of the fixed capital.

This redefinition of capital occurred despite the opposition of most accountants, and it was not unconnected with the noticeable absence of accounting theory in the Courts' deliberations, all the more remarkable because the omission was apparently a deliberate policy of the Courts. The judge in Glasier v. Rolls [1889] went so far as to say:

> Accountants are useful to arrange figures and deduce and explain results, . . . But it is not within [their] province to tell the Court what the expression "capital employed" means, or what any other word means. . . . If there is a term of art or a usage . . . [even] concerning mercantile use of the English language . . . the only evidence admissible would be that of merchants, bankers, or others of that class, and the evidence of accountants would still be excluded.

This statement certainly explains why accountants had not participated in the legal deliberations defining the word capital, but the Court's opinion in the Glasier case is unexpected because here the plaintiff claimed there had been deceit and misrepresentation in the financial details of a company prospectus. The prospectus stated the company was making 17 per cent return on capital em-

ployed; if capital was defined as the economists' circulating capital, then the prospectus was correct, but if capital was the aggregate of assets it was certainly misleading. The evidence of accountants would have been most pertinent to this case.

Conclusion

The 1889 capital reduction was not the result of a faulty depreciation policy, but mainly of an economic recession. If the ships had been adequately depreciated during the first eight years, however, shareholders would have been better prepared for the crisis in 1889, because they would have known that the company had been making substantial losses for the past five years.

Ships were known to deteriorate, and had an expected life of no more than 20 years, so that the policy of only allocating depreciation when the operating profit could afford it seems wrong. But the Northern board were not alone in this practice, other shipping companies operated the same policy. Morris [1984, p. 74] mentions that although Australian shipping companies at the time were charging depreciation "the amount of depreciation was not always reported, only the fact that depreciation had been charged. This always appeared in the directors' report but not always in the profit and loss account." Hendriksen [1977, p.60] has pointed out "The inadequacy of depreciation in income statements is evident from the findings of the Federal Trade Commission in 1915-16, which showed that out of 60,000 successful corporations doing a business in excess of $100,000 a year, fully one half did not include depreciation at all." The Northern board did at least provide for some depreciation, although the amount proved insufficient. However, it was obviously hard in the 1880s to determine what would be an adequate amount. Even as late as 1892 the auditing authority, Dicksee [1892, p. 131] said, "Ships undeniably depreciate, although the rate at which they do so is so variable that no general rules can be given that would prove of any practical utility."

APPENDIX 1 RESTATED PROFIT AND LOSS

	1882	1883	1884	1885	1886	1887	1888	1889
Reported Net Profit	8550	11063	6748	(905)	2755	4522	1490	5417
Less Depreciation at 7 per cent	(3550)	(3796)	(5206)	(7371)	(7378)	(7507)	(7096)	(6847)
Insurance	(2000)	(4000)	(1500)	(2000)	(1000)	(1000)	(1000)	(2000)
Bad Debts				(756)				
Amended Net Profit	3000	3267	42	(11032)	(5623)	(3985)	(7357)	(3430)

APPENDIX 2 CALCULATION OF DEPRECIATION DEFICIENCY

	Cost of Ships	Depreciation at 7 Per Cent	Depreciation Charged to Reserves	Deficiency
1882	50723	3550	1000	2550
1883	54235	3796	1000	2796
1884	74375	5206	3000	2206
1885	105303	7371	2000	5371
1886	105413	7378	1000	6378
1887	107249	7507	1000	6507
1888	101379	7096	1000	6096
1889	97820	6847	2000	4487

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